CLAIMS

What is claimed is:

1. A transceiver, comprising:

a TX path mixer that up converts a signal to be transmitted, a RX path mixer that down converts a received signal, and a local oscillator having an output providing a mixing frequency for each of said TX and RX mixers;

further comprising a directional coupler comprising an input node coupled to said output of said local oscillator and further comprising a first output node coupled to said TX path mixer and a second output node coupled to said RX path mixer.

2. A transceiver as in claim 1, wherein the directional coupler acts as an unequal power divider.

3. A transceiver as in claim 1, wherein the directional coupler prevents the TX signal from being reflected back on the RX signal.

4. A transceiver as in claim 1, wherein the directional coupler operating frequency range is greater than the output frequency of the local oscillator.

5. A transceiver as in claim 1, wherein the directional coupler provides an isolation path from the TX path mixer to the RX path mixer.

6. A transceiver as in claim 1, wherein the directional coupler covers dual bands for dual band single output local oscillator configurations.

7. A transceiver as in claim 1, wherein the directional coupler prevents single tone desensitization.

8. A transceiver as in claim 1, wherein the directional coupler provides higher output

power for the RX path mixer.

9. A transceiver as in claim 1, wherein the directional coupler loss is less than 10 dB.

10. A transceiver as in claim 1, wherein a terminated node of the directional coupler provides a 50 ohm load to absorb the reverse power.

11. A transceiver as in claim 1, wherein the isolation path of the directional coupler provides high reverse isolation from the TX path.

12. A transceiver as in claim 1, wherein within the directional coupler, the reflected signal from the TX path mixer is absorbed by the matched load of the terminated node.

13. A method for generating transceiver signals, comprising:

up converting a signal to be transmitted via a TX path mixer, down converting a received signal via a RX path mixer,

providing a local oscillator having an output providing a mixing frequency for each of said TX and RX mixers;

coupling the output of said local oscillator to an input node of a directional coupler, and

coupling said TX path mixer to a first output node of said directional coupler and coupling said RX path mixer to a second output node of said directional coupler.

14. A method as in claim 13, wherein the directional coupler acts as an unequal power divider.

15. A method as in claim 13, wherein the directional coupler prevents the TX signal from being reflected back on the RX signal.

16. A method as in claim 13, wherein the directional coupler provides higher output power for the RX path mixer.

17. A method as in claim 13, wherein the directional coupler provides an isolation path from the TX path mixer to the RX path mixer.

18. A method as in claim 13, wherein the isolation path of the directional coupler provides high reverse isolation from the TX path.